1895MNRAS..55...85.

MONTHLY NOTICES

OF THE

ROYAL ASTRONOMICAL SOCIETY.

VOL. LV. JANUARY 11, 1895. No. 3

Captain W. DE W. ABNEY, C.B., R.E., D.C.L., F.R.S.,
President, in the Chair.

John James Aubertin, 33 Duke Street, St. James's, S.W.;
Charles Josephus Green, M.R.C.S., L.S.A., 10 St. Paul's Square, Preston, Lancashire;
Frederic Hammond, F.R.I.B.A., 2 Mercer's Road, Tufnell Park, N.;
William Harnett, Cullentra, Wimbledon Park, S.W.;
Rev. Thomas Roseby, M.A., LL.D., The Parsonage, Marrickville, Sydney, N.S. Wales, Australia;
Rev. Peter Hately Waddell, M.A., B.D, The Manse, Whitekirk, Prestonkirk, East Lothian, Scotland; and
Robert Wigglesworth, Esq., York, and 8 Victoria Street, S.W.,

were balloted for and duly elected Fellows of the Society.

The following candidates were proposed for election as Fellows of the Society, the names of the proposers from personal knowledge being appended:

George Denton Hirst, Sydney, New South Wales, Australia (proposed by H. C. Russell);
Samuel V. Hoffman, 1 Chelsea Square, New York City (proposed by Chas. Lane Poor);
Henry T. C. Knox, F.R.G.S., Lieutenant, late Royal Navy, 17 Upper Montagu Street, W. (proposed by G. F. Chambers);
E. F. J. Love, M.A. (Cantab.), Lecturer on Physics at the University, Melbourne, Victoria, Australia (proposed by R. L. J. Ellery); and
Rev. Daniel Higham Sparling, B.A., Biddulph Moor Rectory, Congleton (proposed by T. K. Mellor).

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Seventy-four presents were announced as having been received since the last meeting, including amongst others:

Astronomische Gesellschaft, Catalog, vi. Zone +40° bis +50° (Bonn), presented by the Society; J. E. Gore, The Worlds of Space, and J. R. Hind, Illustrated London Astronomy, presented by Mr. M. C. Sharp; *Nautical Almanac* for 1898, and ditto, Part I., presented by the Lords Commissioners of the Admiralty; photograph of *Orion*, &c., made with a small camera, presented by Dr. Sheldon; a series of eight untouched enlargements of portions of the Moon, from a negative by Lœwy and Puiseux, made and presented by Professor L. Weinek.

Preliminary Note on a Modified (Oblique) form of Cassegrain Telescope. By A. A. Common, LL.D., F.R.S.

Reflecting telescopes on the Cassegrain system, but with the convex mirror placed so as not to obstruct the light from the object, and with the mirrors tilted so as to throw the image to one side of the large mirror, appear to have been made in Germany many years ago.

I first learnt this from Dr. Hugo Schroeder in the course of a conversation about the possible forms of the reflecting telescope. This was, I think, before I began the present 5-foot telescope in 1886. He suggested that I should make it on this principle, and I made some experiments with small mirrors, but, as far as I remember, I did not get better definition than the Herschelian form would give. More than one eminent authority on the theoretical side assured me that good definition was not possible on this plan, and I did not then pursue the experiments further. In 1892 I found it so difficult to properly fix a spectroscope to the 5-foot, and to manipulate it from the stage, and the danger of getting up and down from a high stage in the dark becoming rather pronounced, I determined to seek some more convenient form of telescope.

As I had a 5-foot mirror with a hole in the centre, I could use the Cassegrain form, but before doing so I decided to try again the oblique form, as this allowed high altitudes with my form of mounting. From my previous trials, and from what I had heard from others of the possible definition, I was led only to expect perhaps enough for spectroscopic work.

The results of my experiments, however, have been, in my opinion, so thoroughly satisfactory, that I think it right to lay them before the Society.

Having nothing to go upon except the fact mentioned by Dr. Schroeder, that small telescopes on this plan had been made, and not being able to attack the problem from the theoretical side, I had to do so from the experimental or practical side. I began by trying the effect of a convex mirror on the obliquely

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